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[REDACTED], D/GG/F
22 Aug 1958 25X1A9a

MEMORANDUM FOR: Deputy Director (Intelligence)

SUBJECT: Probable Location of Chinese Sputnik Launching Site

1. Recent reports from Warsaw and [redacted] are the latest of a series

indicating that the Soviet Union has decided to cooperate with Communist

China in launching an earth satellite. Considering this news in the light

of geographic research currently being done on possible guided missiles

ranges in Communist China, it is possible to develop a geographic estimate

of the probable locale of a Chinese earth satellite vehicle launching.

2. ~~Soviet cooperation~~ for a missile powerful enough to launch ^m ~~m~~ ^m a Chinese

earth satellite into orbit would likely require Soviet personnel, Soviet

missiles, Soviet launching equipment, and Soviet supporting equipment.

~~The Chinese participation, in all probability, might well be confined to~~ ^{world government}

technical observation and button-pushing. A transplanted Sputnik may be

expected to be made up of the standard three-stage Soviet ICBM that propelled ~~missiles~~

These previous difficulties into orbit at Tungus Ham

three previous Sputniks into orbit at Tyura Tam.

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The arrangement is to be a single

4. Assuming that this will be a one shot performance, Soviet cooperation

would

probably not include the construction of a permanent ICBM launching base,

but the use will be made of the Soviet mobile train developed for the
operational deployment of ICBM missiles. It is estimated that the Soviet

ICBM mobile train will include transporters capable of transporting 70- to
110-foot long missiles, possibly four or more large and heavy 60-foot liquid

oxygen transporters per missile, a number of standard tank cars of liquid
fuels, as many as 10 or 13 power generator cars weighing as much as 113 tons

each, and an indeterminate number of boxcars, dining, sleeping, and baggage cars,
for personnel and other support.

no 9 In only one area of China proper can a Soviet specialized train move
into the country on Soviet wide-gauge tracks. Beyond the gauge-change points
at Manchouli or Sui-fen-ho a mobile launching train would have to be fitted adapted
with bogey wheels adapting it to standard gauge, or the equipment on the train
would have to be transferred to Chinese rolling stock. Even if this were done,
movement of the heavy launching train over low capacity stretches of Chinese
track would be a difficult task. On the newly-completed Trans-Mongolian
railroad, however, the gauge change at Chi-ning is well within the Chinese
border.

5. Reasonably level terrain is necessary for the development of

~~satellite~~

rail spurs to service the ~~Spout~~ launching area and the mobile launching
train. It is particularly important that no major terrain obstacles hinder
the transport of the missile and its supporting equipment to the launching
area or hamper the development of instrumentation sites and other ground

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support facilities. As the accompanying map suggests, this eliminates extensive areas of mainland China that are comprised of rugged mountains, eroded plateaus, hill lands, or narrow river valleys. The steppes of Inner Mongolia north of Peiping, however, ^{meet} match the terrain requirements well, ^{as} they are level to rolling, sparsely populated, short-grass covered plains, similar to the northern prairie states of the U.S.

6. ⁷ The hazard to populations in the vicinity of the launch site is high within a radius of 25 miles and for an even greater distance around the missile booster impact area -- about 230 to 460 miles downrange. ~~A large area above the areas east of a line connecting Harbin, Peiping, and Ch'eng-tu are too densely populated to permit ICBM missile launchings.~~ ^{generally sparsely} ~~generally sparsely~~ ^{satellite winds} In order to conform to established Soviet instrumentation in the northeast, it is probable that the Chinese Sputnik ^{will} be launched in a northeasterly direction. As indicated by the map, the hazard of a missile booster impact rules out possible launch areas in northern Manchuria. The booster impact area of a launching from the Chi-ning -- P'ang-chiang area, on the other hand, would fall in sparsely populated areas.

7. ⁸ Other launching criteria show similar locational indications. Low precipitation and wind speeds in the Chi-ning area are advantageous for launching operations. Wireline facilities along the Trans-Mongolian railroad are available for communications links between Peiping and the site, as well as for instrumentation support between the site, Ulan Ude and down-range instrumentation points to the northeast. Ad hoc radio communications

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arrangements, of course, might well supplement the land-line links. Security precautions would also be more easily enforced, while at the same time the location remains relatively accessible from Peiping -- a little more than 200 air-miles away.

88. ^{estimated} The operational requirements of a Soviet-sponsored Chinese earth satellite missile launching within the next few months ~~balanced off against~~ ^{considered in association with}

the invariables of Chinese geography ~~therefore~~ suggest the strong possibility of a launching in the Mongolian steppe northwest of Peiping. ~~On a long-term~~, ~~program, it is entirely possible that a Sputnik launching would follow the development of a permanent Chinese ballistic missile testing and training range, probably in Inner Mongolia. Regardless of the location of a successful launching of a Chinese Sputnik, however, the impact of the missile will be~~ ^{A major} ~~a successful launching~~ ^{from this location} ~~world~~ ~~felt in the capitals of non-Bloc Southeast Asian countries over which it will make its initial orbit.* And western nuclear countries will know that the Soviets have been able to transport an ICBM over 3500 miles of Soviet rail line to China, set it up, and fire it.~~

*All of Southeast Asia and Australia would be within the ICBM maximum range of 5500 nautical miles on a great-circle route from the Soviet Far East.

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 → Aside from the use of propaganda benefits ^{to the Bloc} of a successful satellite launching from this location, Western leaders might obtain firm evidence of Soviet capability to ~~transport~~ utilize mobile trains for the deployment of ICBMs.

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